



Out of the Box Multiplication

Agenda:

- Growth Mindset Norms for the Math Classroom- Jo Boaler (YouCubed.com)

Everyone can learn math to the highest levels.
Mistakes are valuable.
Questions are really important.
Math is about creativity and making sense.
Math is about connections and communicating.
Math class is about learning, not performing.
Depth is more important than speed.

-Number Line Banner-

We marked a large, paper number line with Post-it Notes to teach concepts such as multiples, factors, the Identity Property of Multiplication, and divisibility rules, as well as prime, composite, even and odd numbers.

-Ten-Frames-

We used magnetic 10 frames and counters to Explain "Why the Finger Trick for 9 Facts" works. As we added each nine, we shifted some of the nine's to the previous 10 frame to complete another set of 10. We noticed that this shifting caused the number of 10 frames to increase by one and the number of ones to decrease by one each time a group of 9 counters was added. We recorded this pattern using a place value table and on our fingers.

- The Learning Carpet- Wendy Hill- (thelearningcarpet.com)

We placed and removed number cards on a 6'x6' carpet (which was an open hundred grid) to teach number patterns, the concepts of multiples and factors, comparing numbers, the order of operations, writing equations using a variety of operations, array models, algebraic properties, multiplying decimals, transformations, and number decomposition.

-Number Talks

We looked at student samples of Number Talk solutions and then solved several multiplication problems using Number Talk strategies such as critical thinking, the usage of a variety of approaches to solve a problem, proving the validity of our solutions, checking calculations for accuracy, looking for patterns, using precise academic language to describe our reasoning and persevering through a problem.

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